What is claimed is:

1. A method for modulating the activity of at least one component of a BRCA1-BRCA2-containing complex (BRCC) comprising contacting a BRCC or cell containing a BRCC with an agent that interacts with a nucleic acid sequence encoding BRCC36 or BRE, or a product thereof, so that the expression or activity of BRCC36 or BRE is altered thereby modulating an activity of at least one component of a BRCC.

2. The method of claim 1 wherein the at least one component of a BRCC comprises BRCA2, BRCA1, RAD51, BARD1, BRCC300, BRCC140, BRCC130, BRCA1 Δ11, BRCC80, BRE, or BRCC36.

3. The method of claim 1 wherein the activity of the component comprises ubiquitin E3 ligase activity, ubiquitin hydrolase activity, DNA repair activity, or transcriptional regulator activity.

4. A method for identifying an agent that modulates the ubiquitin E3 ligase activity or ubiquitin hydrolase activity of BRCC comprising contacting BRCC with a test agent and monitoring the ability of said agent to alter the level of ubiquitination of select protein which is indicative of ubiquitin E3 ligase activity or ubiquitin hydrolase activity of BRCC.

5. A method for identifying an agent that modulates the DNA repair activity of BRCC comprising contacting a cell containing BRCC with a test agent and monitoring the ability of said agent to alter cell survival rates in the presence of ionizing radiation or alter homology-directed DNA repair which is indicative of DNA repair activity of BRCC.

6. A method for identifying an agent that modulates the transcriptional regulator activity of BRCC comprising contacting a cell containing BRCC with a test agent and monitoring the ability of said agent to alter the expression of genes containing p53 response elements which is indicative of transcriptional regulator activity of BRCC.

7. An agent identified by the method of claim 4.

8. An agent identified by the method of claim 5.

9. An agent identified by the method of claim 6.

10. A method for treating a cancer associated with BRCC comprising administering to a patient having a cancer associated with BRCC an effective amount of an agent identified by the method of claim 4.

11. A method for treating a cancer associated with BRCC comprising administering to a patient having a cancer

associated with BRCC an effective amount of an agent identified by the method of claim 5.

12. A method for treating a cancer associated with BRCC comprising administering to a patient having a cancer associated with BRCC an effective amount of an agent identified by the method of claim 6.

13. A method for identifying an agent that inhibits the expression of BRCC36 or BRE protein comprising contacting a cell expressing BRCC36 or BRE protein with a test agent and monitoring the ability of said agent to alter the expression of BRCC36 or BRE protein.

14. An agent identified by the method of claim 13.

15. A method for treating a cancer associated with BRCC comprising administering to a patient having a cancer associated with BRCC an effective amount of an agent of claim 14.

16. An antibody which specifically recognizes BRCC36 or BRE protein.

17. A method for diagnosing a cancer or the risk of developing a cancer associated with BRCC comprising

detecting a level or sequence of a nucleic acid sequence encoding BRCC36 or BRE, or a product thereof, in sample;

comparing said level or sequence of a nucleic acid sequence encoding BRCC36 or BRE, or a product thereof in the sample to a level or sequence of a nucleic acid sequence encoding BRCC36 or BRE, or a product thereof, in a control;

wherein a change in the level or sequence of a nucleic acid sequence encoding BRCC36 or BRE, or a product thereof, in the sample as compared to the control is indicative of a cancer or the risk of developing a cancer associated with BRCC.